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A DIVISION OF DE LUXE LABORATORIES, INC.
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"Say, did I tell you? The wife and I are taking up Photography?"

THIS MONTH'S FEATURE:

16MM COLOR PRINTS ON TV

published monthly

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Some of the Problems Involved With . . .

16 MM COLOR PRINTS ON TV

Agreement exists that the overall quality of many of the 16mm color prints being telecast today leaves something to be desired.

But at that point agreement ends and confusion begins. Many 16mm prints provide an excellent television picture—so just what percentage are bad? Whose fault is it that so many 16mm color prints on television are of indifferent or poor quality, and that various 16mm prints telecast together in one program result in noticeable color variation on the home receiver?

The answers to these questions are important to DeLuxe General and to all motion picture laboratories. Even though the problems may be only partly under the laboratory's control, the actions which might result could seriously affect us. Film has certain important advantages which should insure the continued major use of film in television programming—but the problems which are now being widely discussed could seriously reduce television's use of film, to the disadvantage of both the television and the film industry.

The 16mm print problem is of two varieties—the individual print that is of overall poor quality, and the color variations in prints spliced or printed together within a program, with particular reference to commercials. On the latter, TV's quality control men report that, even though the individual commercial prints might televise acceptably if run separately, the change in color from spot to spot is beyond control and unacceptable.

The People Involved

Let's take up the different parts of the problem situation—the people involved—in an attempt to tie down the things that need attention.

Those involved include:

1. The film manufacturer. Is the color raw stock of consistent quality, and designed for television transmission?
2. The producer—particularly the cameraman and lighting director. Do they select and arrange colors and stay within the light range that TV people consider essential?
3. The laboratory. Are its quality control standards and production methods such as to assure consistent quality print product?
4. The advertising agency. As representative of the advertiser, do its people know enough about color, film, production, and quality control to supervise the project?
5. The advertiser. Does he recognize the direct relationship between cost and quality, between time and result?
6. The distributor. Is he selling reels of film or satisfactory programming?
7. The telecine equipment's manufacturer. Is his equipment built and adjusted to an industry standard? Is there such a standard?
8. The network or station broadcaster. How does he check and control the quality of film prints to be televised? On what basis does he reject prints?

Photography and Electrography

The first step in problem solving is defining the problem.

First, we must recognize that two different systems are involved, film and television,

When we look at film in a theater or screening room we are looking at a film image projected directly to a reflecting screen, and usually in a darkened room. When we look at film on a TV set, the picture has gone from a film print—through a projector—into a television camera which changes the film's visual images into electronic impulses—through the television chain and out the transmission tower—and into the home receiver where the electronic impulses activate the phosphors in the TV tube to recreate the visual picture—and this picture is viewed in a lighted room.

Producing Film for TV

The experts tell us that, in order to achieve the best transmitted picture, film produced for television should have a limited lighting range, arrangement of colors to provide good contrast, and a white reference in each scene. Films which do wind up on TV may not fall within these limits, either because they are films which were originally reproduced for theatrical or other screen distribution or, even though shot directly for television, they are still produced by theatrical exhibition standards.

No Telecine Chain Standard

However, television's film reproducing equipment itself is not built to a single standard, and the print that comes out okay in one system may appear objectionable in another. Just as the theater and the producer's screening room should be built and operated in conformity to standards, the telecine chain of any station should be built and operated by the same standards as all others in other stations including the monitor on which the picture is judged, although this ideal situation doesn't exist in either the theater or the telecine system, the lack is more critical in television because of the multiplicity and variety of the film material it uses.

Any one half hour film program may include as many as fifteen different pieces of film—and it's possible that the fifteen came from as many different laboratories. At the worst, each section of film might show a variation in color tone or color balance—with the result that the home viewer is constantly trying to adjust his set's color balance, or is jarred by the noticeable shift in color within the program.

Aside from the transmission problem involved in such intercut material, some show prints with no intercut sections are reported to be of poor overall quality, or to show color shifts from scene to scene.

Film Can Transmit Excellent Pictures

Excellent pictures can be transmitted from 16mm film prints to the television set's picture tube. The better prints will not only transmit pictures as good as those of television tape, but usually better because of the careful production that is a normal part of professional film production, particularly 35mm production.

It's in order to ask, why don't all 16mm prints shown on television produce a good picture on the set?

There are various reasons why there are problems with 16mm print quality, most of which can be overcome by the establishment and following of certain standards, exercising of greater care, and recognition of the relationship between cost and quality.

Here are some of the reasons:

The 16mm frame is about 1/5 the size of the 35mm frame—and is not capable of recording as much information. There is less margin for error in exposing and/or printing 16mm. It actually demands a higher degree of professional quality control than does 35mm.

In both production and printing, despite the need for greater care, 16mm may receive less professional care than 35mm, because of its being thought of as "sub-standard film".

In television commercials, and other optical work, the 16mm release print is several stages removed from the original 35mm negative. The 35mm print is made directly from the cut negative or, in optical work, the stages are 35mm cut negative—35mm color positive—35mm optical dupe negative—35mm release print. But, the 16mm print stages are 35mm cut negative—35mm color positive—35mm optical dupe negative—35mm master positive—16mm reduction negative—16mm release print. Two additional intermediate printing stages are bound to affect quality.

The 35mm prints in television are normally utilized only in network origination, or in key stations—and are relatively few in number. Bulk distribution utilizes the 16mm print, frequently in quantities of hundreds. The few 35mm prints will receive careful attention and inspection. Will the many 16's?

In many local broadcast stations there is no time or extra equipment to check the color of a print before telecasting, or — if the print is checked — too often this consists of running down until a scene is found with faces and the system is then adjusted to the color in that scene. If the faces in that particular scene in that particular print are off color, the entire print telecast will be off.

The time pressures are extreme, and any time delays along the decision-planning-production line must be made up in the printing schedule—since the air date is set and immovable. One result is that a print that all agree could be better and should be re-printed will go on the air. The fixed air date is the reason why "there never seems to be time to do it right the first time, but always time to do it over"

So what do we do about it?

Fortunately, the various parties involved do recognize the need to get together on standards, and a new round of discussion and decision has started.

The networks' technical heads are spurring action by suggestion as well as criticism. Eastman Kodak's interest is evidenced by its new 16mm color film designed specifically for TV news requirements, and by the active participation of its people in the committee work of various television and motion picture technical societies. The advertisers and agencies have instituted or asked for informational meetings to train their people.

The producers are learning how to make the film for television, partly by seeing poor results. The telecine equipment manufacturers won't hold out against standards for equipment, once the others agree on standards for film operation.

What can the laboratories do to improve the broadcast quality of 16mm color prints?

One obvious answer—each lab establish and maintain its own high standards of quality control, combined with critical inspection. Also, participate fully in the committee work and testing which is directed to the development of standards. And, try to understand the particular print problems of the television broadcaster and be willing to spend the time and effort to help solve the problems.

However, a word of caution regarding higher standards—and lower prices. While competition is a natural and practical part of our total business system, the buyer must recognize that there is a direct relationship between quality and cost—not only in the lab, but in all the other parts of the film-television chain. Within reason, one gets what one pays for. Squeezing a few more percentage points out of the print price may also weaken quality control and research improvement.

So, even though all color—including 16mm color—is subjective, we need to be objective about the present problems and the future solutions!

SMPTE COMMITTEES ACTIVE IN TV PRINT STANDARDIZATION

Several working committees of the Society of Motion Picture & Television Engineers are active in the department of standards governing color film for television, with the brunt of the work falling on the Color Committee, the Television Committee, and the sub-committee developing standards for review rooms in which 16mm color prints for television are to be evaluated.

Similar work is underway in the European Broadcast Unions. However, the two television broadcast systems in operation in England and the Continent use fly spot scanners rather than the United States' Vidicon pickup—so that the European standards will require an adaption for the U. S., and vice versa.

A Special SMPTE Meeting On . . . I TELECINE COLOR—MIXING AND MATCHING

As this issue of *Rewind* went to the printer, the Rochester and Toronto sections of the Society of Motion Picture & Television Engineers were presenting a Saturday, September 21, full day papers and discussion program on the subject of "Telecine Color—Mixing and Matching," in Rochester, New York.

The program was to be keyed by Rodger J. Ross, Editorial Vice President of the SMPTE and Supervisor of Technical Film Operations, Canadian Broadcasting Company, in a presentation entitled "The Statement of the Problem."

Representatives of networks, equipment manufacturers, optical houses, and laboratories, were to present additional papers covering the critical quality areas of print preparation and projection.

DeLuxe General was represented by Fred Scobey, Engineering Vice President, and Arthur Miller, Technical Consultant.

"ARE YOU LOOKING?"

Responses to the listings below should be addressed to DeLuxe General Film Laboratories, Inc., % REWIND CODE _____, 1546 N. Argyle Ave., Hollywood, Ca., 90028. They will be forwarded, unopened, to the organization or individual placing the listing.

Producer/Director for 16mm Educational Films: Five years experience in non-theatrical production with willingness to study biological subject matter in depth. Knowledge of Arri and Bell & Howell cameras (macro and micro set-ups); editing, scoring, and animation background knowledge. Motion Picture Industry references (1965-68) for contact. One or more screen credit films to be available for viewing. Position presently open with national organization. Code 522.

Director of Photography & Visual Effects: Experienced in both theatrical and non-theatrical, PR films. Wants creative opportunity with live MP production or business company. Salary secondary. Biog. available. Code 523.

Camerman-Editor: Experience with a variety of 16mm motion picture cameras, editing, Oxberry animation stand, black & white processing lab and various other motion picture and audio-visual techniques. Looking for a position with responsible college or university film unit or small commercial producer. Salary considerations are open. Resume on request. Code 524.

Energetic, Creative Film Maker: Seeking executive staff position with production company or agency. Twenty years of continuous production experience, including script writing, storyboard preparation, budget planning, directing, cinematography, animation layout, sound recording and editing. A real tiger. Code 525.

Versatile Filmmaker: Professionally skilled in all areas of production (script-to-screen), looking for job where this competence and versatility can be applied to the development and operation of a compact but productive unit. 38 years old, married, 3 children, presently employed at approx. \$12,300 salary. Complete resume available. Code 526.

Experience Pays. A/V coordinator and counselor, experienced and active in all areas of communication: sales, training, management, public relations, seeks position with forward-looking company to develop and direct meaningful Audio/Visual program. Also writer and lecturer. Code 527.

A-V DATE BOOK

Oct. 10,11,12	Information Film Producers of America, Annual Conference, Palm Springs, California
Oct. 21-24	Industrial Audio-Visual Association, Fall Meeting, Mall Motor Hotel, Dayton, Ohio.
Oct. 23	Motion Picture and Television Seminar 12th Annual San Francisco Film Festival, San Francisco, California.
Oct. 24-Nov. 3	12th Annual San Francisco International Film Festival, Masonic Auditorium, San Francisco, California.
Nov. 5-25	3rd Annual Independent Film Makers Competition, St. Lawrence University, Canton, N.Y. 13617.
Nov. 10-15	104th Semi-Annual Technical Conference, Society of Motion Picture and Television Engineers, Washington Hilton Hotel, Washington, D.C.

9TH ANNUAL INTERNATIONAL BROADCASTING AWARDS COMPETITION

Douglas S. Cramer, IBA general chairman and executive vice President of Paramount Television, announced that a total of 20,000 invitations are being sent to advertisers, advertising agencies, broadcasters and production companies for the 9th annual International Broadcasting Awards competition.

The IBA, sponsored by the Hollywood Radio and Television Society, will select the "world's best" radio and television commercials for 1968. Last year, 3103 entries were received from 32 nations.

Cramer said this year's record invitation list was based on the tremendous growth of commercial broadcasting, estimating that more than 70 countries now have some form of television advertising.

"One country after another is discovering that only advertising can provide funds sufficient to maintain and expand their broadcasting systems," Cramer said.

In all, trophies will be awarded in 12 television and eight radio categories. Main television competition is for live action and animation. Principal radio categories are for musical and humorous spots.

Awards also will be made in both media for ID's, commercials 10 seconds and under; local commercials, presented in only one market; public service announcements, and for a series of three commercials for one product or service.

Finalists in each category will be selected by nearly 50 creative screening panels located in various parts of the world. An international board of judges meeting in Hollywood will then select trophy winners in each category, and sweepstakes winners for television and radio. Trophies will be presented at a gala dinner in the Century Plaza Hotel on March 11 with Hollywood celebrities taking part.

SMPTE EDUCATIONAL LUNCHEON MEETING

An Educational Luncheon Meeting, Wednesday, November 13, will be one of the features of the 104th Technical Conference of the Society of Motion Picture and Television Engineers which will be held November 10-15, at the Washington Hilton Hotel in Washington, D. C.

Chairman of the Luncheon, Albert J. Rosenberg, Vice President and General Manager of McGraw-Hill Films, announced that the meeting has been scheduled to promote a growing awareness of the importance and opportunities for motion pictures and television in Education.

The luncheon will feature speakers who are leading figures in the educational media field who will discuss the relationship of business to education and the responsibilities and the opportunities this presents. Speakers will be Robert E. Slaughter, Executive Vice-President of McGraw-Hill, Inc., and Father John M. Culkin, S. J., director of the National Film Study Project at Fordham University.

Following the Luncheon, there will be a program of educational papers. Some of the papers to be presented are:

Le Cinéma et L'Education en France

A Remote-Access Instructional System Model for a Regional Occupational Center

Case Study Reports on Multimedia Classroom Facilities

How to Make Effective Visual Technical Presentations

Motion Picture and Television Aids to Instruction:

A Survey and Bibliography

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